

1. A method of generating a shadow in a virtual three-dimensional (3D) space, comprising:

adjusting a resolution of a 3D model;

projecting elements of the 3D model onto a surface in the  
5 virtual 3D space; and

rendering a shadow having the adjusted resolution of the  
3D model on the surface using the projected elements.

2. The method of claim 1, wherein the elements of the 3D  
10 model are projected based on a location of a virtual light  
source in the virtual 3D space.

3. The method of claim 2, wherein the virtual 3D space  
includes a second virtual light source; and

15 the method further comprises:

adjusting the resolution of the 3D model to a second  
resolution;

projecting elements of the 3D model onto a second  
surface in the virtual 3D space based on a location of  
20 the second virtual light source; and

rendering a second shadow having the second  
resolution on the second surface using the elements  
projected on the second surface.

4. The method of claim 1, wherein adjusting comprises reducing the resolution of the 3D model.

5 5. The method of claim 4, wherein adjusting comprises removing elements of the 3D model.

6. The method of claim 5, wherein the 3D model comprises a multi-resolution model.

10 7. The method of claim 1, further comprising:  
providing a user interface for use in adjusting the resolution of the 3D model.

15 8. The method of claim 1, further comprising:  
rendering the 3D model at its original resolution.

9. The method of claim 1, wherein the elements comprise vertices of the 3D model.

20 10. The method of claim 1 wherein the elements comprise polygons of the 3D model.

11. An apparatus for generating a shadow in a virtual three-dimensional (3D) space, comprising:

a memory that stores executable instructions; and

a processor that executes the instructions to:

adjust a resolution of a 3D model;

project elements of the 3D model onto a surface in the virtual 3D space; and

render a shadow having the adjusted resolution of the 3D model on the surface using the projected elements.

12. The apparatus of claim 11, wherein the elements of the 3D model are projected based on a location of a virtual light source in the virtual 3D space.

13. The apparatus of claim 12, wherein the virtual 3D space includes a second virtual light source and the processor executes instructions to:

adjust the resolution of the 3D model to a second resolution;

project elements of the 3D model onto a second surface in the virtual 3D space based on a location of the second virtual light source; and

render a second shadow having the second resolution on the second surface using the elements projected on the second surface.

5           14. The apparatus of claim 11, wherein adjusting comprises reducing the resolution of the 3D model.

15. The apparatus of claim 14, wherein adjusting comprises removing elements of the 3D model.

10           16. The apparatus of claim 15, wherein the 3D model comprises a multi-resolution model.

15           17. The apparatus of claim 11, wherein the processor executes instructions to provide a user interface for use in adjusting the resolution of the 3D model.

20           18. The apparatus of claim 11, wherein the processor executes instructions to render the 3D model at its original resolution.

19. The apparatus of claim 11, wherein the elements comprise vertices of the 3D model.

20. The apparatus of claim 11, wherein the elements  
comprise polygons of the 3D model.

5 21. An article comprising a machine-readable medium that  
stores executable instructions for selecting a target object  
in virtual three-dimensional (3D) space, the instructions  
causing a machine to:

adjust a resolution of a 3D model;

10 project elements of the 3D model onto a surface in the  
virtual 3D space; and

render a shadow having the adjusted resolution of the 3D  
model on the surface using the projected elements.

15 22. The article of claim 21, wherein the elements of the  
3D model are projected based on a location of a virtual light  
source in the virtual 3D space.

20 23. The article of claim 22, wherein the virtual 3D space  
includes a second virtual light source and the article further  
comprises instructions that cause the machine to:

adjust the resolution of the 3D model to a second  
resolution;

project elements of the 3D model onto a second surface in the virtual 3D space based on a location of the second virtual light source; and

render a second shadow having the second resolution on the second surface using the elements projected on the second surface.

24. The article of claim 21, wherein adjusting comprises reducing the resolution of the 3D model.

25. The article of claim 24, wherein adjusting comprises removing elements of the 3D model.

26. The article of claim 25, wherein the 3D model comprises a multi-resolution model.

27. The article of claim 21, further comprising instructions that cause the machine to provide a user interface for use in adjusting the resolution of the 3D model.

28. The article of claim 21, further comprising instructions that cause the machine to render the 3D model at its original resolution.

29. The article of claim 21, wherein the elements  
comprise vertices of the 3D model.

5        30. The article of claim 21, wherein the elements  
comprise polygons of the 3D model.

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